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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/068,103

02/05/2002

Dan E. Fischer

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08/23/2004

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EXAMINER

WILSON, JOHN J

ART UNIT

PAPER NUMBER

3732

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/068,103	Applicant(s) FISCHER ET AL.	
	Examiner John J. Wilson	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4-7,9-31,40-42,44 and 46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4-7,9-31,40-42,44 and 46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5-7, 9-14, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 5, 9 and 12 have been left dependent on cancelled claim 1. For purposes of this office action, it is assumed that these claims depend from claim 46. In claim 21, lines 1 and 2, "the proximal end of the body is substantially cylindrical" contradicts claim 19, lines 4 and 5, "the proximal end of the body is tapered"

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5/46, 22-24 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eibofner et al (5912470). Eibofner shows an elongate device for curing light having a body that is inherently capable of being held and rotated, means 4 at the distal end for emitting radiant energy directly as shown, means, see tapering, at the proximal end that is inherently capable of functioning in the claimed manner of being

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able to sit in a recess because of the many possible types and sizes of inferentially claimed recesses, a cable for power, column 3, lines 17-19. The limitations of "light-weight", "slender" and "easily rotated" in describing the body are qualitative terms subject to interpretation. It would be obvious to one of ordinary skill in the art to interpret the body of Eibofner as having such qualities. The size and shape of the Eibofner device with respect to other inferentially claimed hand pieces is an obvious matter of choice in hand pieces used to the skilled artisan.

Claims 2, 4, 5/2 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eibofner et al (5912470) in view of Kennedy et al (5634711). Eibofner shows the structure as described above, however, does not show the use of an LED. Kennedy teaches using a LED 22. It would be obvious to one of ordinary skill in the art to modify Eibofner to include the use of an LED as shown by Kennedy in order to make use of known light sources to deliver the desired light to the work area. As to claim 9, Eibofner does not show the use of a lens. Kennedy teaches using a lens 136, Fig. 7, column 4, lines 35-42. It would be obvious to one of ordinary skill in the art to modify Eibofner to include the use of a lens as shown by Kennedy in order to better focus the light on the desired area. As to claim 10, see filter 7 of Eibofner. As to claim 12, Eibofner does not show the use of a heat sink. Kennedy teaches using a heat sink 26. It would be obvious to one of ordinary skill in the art to modify Eibofner to include the use of a heat sink as shown by Kennedy in order to cool the light source.

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Claims 6/5/46 and 7/6/5/46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eibofner et al (5912470) in view of Sullivan (5975895). Eibofner shows the structure as described above, however, does not show controls for activating the light source for a duration of time and for altering the time. Sullivan shows a control 28 that activates a timer and includes a control for altering the timer, column 6, lines 66 and 67, and column 7, lines 1-12. It would be further obvious to modify Eibofner to include controls as shown by Sullivan in order to better deliver the desired amount of light to the work site.

Claims 6/5/2 and 7/6/5/2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eibofner et al (5912470) in view Kennedy et al (5634711) as applied to claim 2 above, and further in view of Sullivan (5975895). The above combination shows the structure as described above, however, does not show controls for activating the light source for a duration of time and for altering the time. Sullivan shows a control 28 that activates a timer and includes a control for altering the timer, column 6, lines 66 and 67, and column 7, lines 1-12. It would be further obvious to modify the above combination to include controls as shown by Sullivan in order to better deliver the desired amount of light to the work site.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eibofner et al (5912470) in view of Kennedy et al (5634711) as applied to claim 12 above, and further in view of Verderber (5457611). While Kennedy shows a heat sink 26, the

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above combination does not show the type of material used for the heat sink.

Verderber teaches using aluminum for a heat sink 30, column 3, lines 29-35. It would be further obvious to one of ordinary skill in the art to modify the above combination to include using an aluminum heat sink as shown by Verderber in order to make use of known materials to better dissipate heat.

Claims 15-18, 25-28, 40-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al (5013240) in view of Kennedy et al (5634711) and Osterwalder et al (6102696). Bailey shows a system that includes a tray 27 having a recess at 85 for receiving a light curing device 30 having a body as suggested in Fig. 2 that is sized to be received and held in an upright fashion in the holding and shows a tray that also receives other dental instruments and a light source at the distal end in the form of a light rod as shown. Bailey does not show the body shape of device 30. Kennedy shows a light curing device 10 having an elongated body as shown. It would be obvious to one of ordinary skill in the art to modify Bailey to include a body shape as shown by Kennedy in order to make use of known shapes in the art to best deliver light to the desired location. Bailey further shows an optic cord 60 attached to the proximal end of device 30, however, does not show a power cord. Kennedy shows a power cord 20 at the proximal end. It would be further obvious to one of ordinary skill in the art to modify Bailey to include a power cord as shown by Kennedy in order to make use of art known ways of delivering light to the work site. The above combination does not show the limitation of "eliminate any need for a light guide". Kennedy shows locating LEDs at

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the distal end, however, shows using a light guide. Osterwalder shows using LEDs at the distal end without using a light guide. It would be obvious to one of ordinary skill in the art to modify the above combination to include not using a light guide as shown by Osterwalder in order to make use of known shapes and known ways of delivering light to the desired site. The limitations of "light-weight" and "slender" in describing the body are qualitative terms subject to interpretation. It would be obvious to one of ordinary skill in the art to interpret the body of the above combination as having such qualities. The shown combination can inherently be inserted and rotated within the mouth of a patient. As to claims 18 and 40, see lens 136 of Kennedy. As to claims 25-27, the size and shape with respect to other inferentially claimed hand pieces is an obvious matter of choice in hand pieces used to the skilled artisan. As to claim 28, Kennedy teaches using a heat sink 26. As to claims 40 and 42, Osterwalder shows a LED light source that is laterally positioned. As to claim 41, Osterwalder shows a single axis body as suggested by Bailey.

The indicated allowability of claims 19-21 and 29-31 is withdrawn in view of the newly discovered reference(s) to Doty (4952146) and Runnells et al (4178913). Rejections based on the newly cited reference(s) follow.

Claims 19-21, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al (5013240) in view of Doty (4952146). Bailey shows a curing device 30, tapered holder at 85 that is sized and shaped to engage the body of

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30 as shown and connecting means as shown. Bailey does not show a tapered proximal end on the body of the curing device. Doty shows that it is known to provide the proximal end of dental hand pieces with a taper that matches the size and shape of the holder, see Fig. 1. It would be obvious to one of ordinary skill in the art to modify Bailey to include a tapered end as shown by Doty in order to better mount the hand piece when not in use. As to claim 21, Bailey shows a slot. As to claim 30, Bailey shows a dental hand piece holding tray 27 having at least two recesses as shown, a curing device 30 having a body that fits in a recess of the holding tray, a tip on the curing device that comprises a light source disposed at the distal end, and an additional dental hand piece 31 received in a recess. Bailey does not show a tapered body to facilitate insertion in the recess. Doty shows that it is known to provide the proximal end of dental hand pieces with a taper that matches the size and shape of the holder, see Fig. 1. It would be obvious to one of ordinary skill in the art to modify Bailey to include a tapered end as shown by Doty in order to better mount the hand piece when not in use. The shown tapering inherently facilitates insertion.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al (5013240) in view of Doty (4952146) as applied to claim 30 above, and further in view of Runnells et al (4179813). The above combination does not show using removable holders. Runnells show removable holders 21, column 5, lines 15-19. It would be obvious to one of ordinary skill in the art to modify the above combination to include

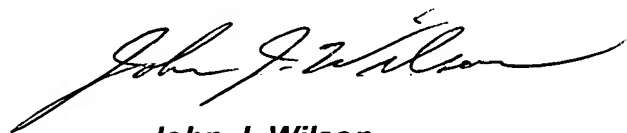
removable holders as shown by Runnells in order to allow for sterilization of the elements.

Remarks

Applicant's response filed May 27, 2004 has been carefully considered, however, is not persuasive. A light rod at the distal end of a light curing device comprises a source of light that is emitted from the end of the rod, and as such, meets the claim language. While Osterwalder is self-contained, the prior art as a whole shows that it is known to use power sources located in or remote from the hand piece, and as such, would be a matter of choice to the skilled artisan looking for ways to best supply power to a curing device.

Conclusion

Any inquiry concerning this communication should be directed to John Wilson at telephone number (703) 308-2699.



**John J. Wilson
Primary Examiner
Art Unit 3732**

jjw
August 21, 2004
Fax (703) 308-2708
Work Schedule: Monday through Friday, Flex Time